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Before the
# Federal Communications Commission
Washington, DC 20554

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| In the Matter of Federal-State Joint Board on Universal Service | ) ) | CC Docket No. 96-45 |

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## REPLY COMMENTS OF AIRTOUCH COMMUNICATIONS, INC. ON FEDERAL-STATE JOINT BOARD RECOMMENDED DECISION


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**REPLY COMMENTS OF AIRTOUCH COMMUNICATIONS, INC.
ON FEDERAL-STATE JOINT BOARD
RECOMMENDED DECISION**

AirTouch Communications, Inc. ("AirTouch") hereby submits its reply comments regarding the *Recommended Decision* [1] in the above-captioned proceeding.

## I. SUMMARY

The comments in this proceeding demonstrate widespread agreement that the Federal-State Joint Board ("Joint Board") has made significant progress in reforming a costly and ineffective system of taxes and subsidies whose goal is to promote universal service. However, there is also widespread agreement that several significant recommendations made by the Joint Board are legally and economically unsound and should not be adopted by the Commission:

- Preliminary analysis presented in AirTouch's comments indicates that the taxes needed to finance *federal universal service programs alone* could range from 6 to 12 percent of all total intrastate and interstate service revenues. These figures are consistent with independent projections developed by the NARUC staff.
- The estimated efficiency losses associated with these taxes range from approximately $1 to over $6 billion annually. These losses in taxpayer welfare are *above and beyond the direct costs of the taxes themselves* — which themselves could be substantial.

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1 *Federal-State Joint Board on Universal Service*, CC Docket No. 96-45, FCC 96-93, *Recommended Decision* (rel. November 8, 1996) (*"RD"*).

- Using data developed for NARUC, AirTouch projects that the comparable efficiency losses would range from $1 billion to over $11 billion annually if federal universal service programs were funded by taxing only interstate net revenues.

These costs are needlessly large because the *RD* proposes programs that generate significant costs without generating significant benefits and because the funds are raised in inefficient ways. As a wide range of commenters have demonstrated, the Commission should take several steps to reduce the size of these efficiency losses and the resulting harm to telecommunications consumers:

- The subscriber line charge should be moved toward cost-based levels. Generally this will entail raising this charge, not lowering it. There is widespread agreement that this issue should be addressed in the access reform proceeding.

- The Commission should fund federal universal service programs through a flat end-user surcharge. This basis is superior to all others in terms of fairness, efficiency, and accountability. In particular, annual projected efficiency losses associated with such a surcharge range from $5 *million* to $242 *million*. Thus, adoption of this proposal would save telecommunications consumers billions of dollars each year in comparison with revenues taxes that raise the same amounts of contribution.

- If the Commission ignores public interest benefits of a flat end-user surcharge and chooses to levy a tax based on net revenues or retail revenues, then the tax base should include both interstate and intrastate revenues in order to prevent the welfare losses from being even larger.

- The Commission should make use of market-based incentives and eliminating items not entitled to funding — such as inside connections — to hold down the costs of universal service support programs and thus reduce the costs borne by all telecommunications consumers. The Commission should adopt the Joint Board's recommendation to rely on forward looking economic costs, not embedded costs, as the basis of calculating required universal service subsidy levels. The Commission should refine the existing proxy models and allow comments and reply comments once the January workshops have been held. The Commission also should commence a proceeding to design and implement auctions.

- In light of the high costs associated with raising universal service contributions, subsidies should be limited to those programs that clearly serve a strong public interest and satisfy Congressional intent. Low thresholds for high-cost areas, subsidies for inside connections for schools and libraries, and subsidies for single-line businesses do not meet this test. Moreover, the Commission lacks the authority to tax telecommunications service providers to subsidize inside connections or Internet services. Further, it is both wasteful and harmful to competitive neutrality to use universal service funds to subsidize carriers' building or upgrading their networks to offer rural telemedicine services.

- The Commission and states must coordinate their policies to avoid placing inefficient, overly burdensome, and discriminatory taxes upon telecommunications carriers. As the sole body with a broad, national perspective, the Commission must be the one to take the lead in coordinating policies. The Commission should set guidelines under which a state's carriers and subscribers are eligible for federal universal service support funds only if state programs comply with those guidelines. This approach is similar to that used to administer highway construction funds.

- The Commission should not impose universal service funding obligations on services, such as paging, that both are not eligible to receive support from the universal service fund but also which can never be a substitute for land line telephone service.

## II. INTRODUCTION

While the *RD* makes significant contributions to the public discussion of universal service policy, it also proposes a variety of expensive initiatives apparently without taking into account the negative effects that the resulting taxes will have on consumer welfare and economic activity. Consequently, AirTouch believes these initiatives are irrational, economically unsound and are therefore contrary to the requirements of Section 254 of the Telecommunications Act of 1996 ("1996 Act").[2]

In its previously-filed comments, AirTouch addressed the present lack of sound economic analysis in the *RD* by offering some preliminary calculations of the effects of the Joint Board's recommendations on telecommunications consumers. Nothing

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2 Pub. L. No. 104-104, 110 Stat. 56 (1996). The 1996 Act substantially amends the Communications Act of 1934 codified at 47 U.S.C. §§ 151 *et seq.* Hereinafter, all citations to the 1996 Act will be to the United States Code.

submitted by other parties contradicts AirTouch's conclusions that the burdens placed on telecommunications service providers and subscribers to fund the proposed universal service programs: (1) will be significant, even if the funds are minimized as proposed by most commenters; (2) will give rise to enormous efficiency losses; and (3) will likely harm many of the consumers universal service programs are supposed to assist.

In light of these costs, the Commission should act to ensure that universal service programs are efficiently designed and are no larger than absolutely necessary to achieve their policy goals. Only in this way will the Commission protect the public interest and reduce the economic harm to telecommunications service subscribers and providers.

One way to prevent waste is to ensure that universal service providers receive subsidies no larger than the true economic costs of providing universal service. A system under which a carrier is subsidized based on claimed embedded costs overstates the amount to which the universal service provider should be entitled and generates little incentive for cost reduction. The Commission must avoid any outcome where a carrier is incented to inflate costs to justify more support. AirTouch agrees with the commenters that demonstrate that to avoid the resulting harm to consumers and efficiency, the Commission should introduce market incentives and implement regulatory schemes that mimic competitive markets wherever possible.[3]

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[3] *See, e.g.*, Comments of Ad Hoc Telecommunications Users Committee ("Ad Hoc TUC") at 6-8; Comments of Cellular Telecommunications Industry Ass'n. ("CTIA") at 3-6; Comments of MFS Communications Co., Inc. ("MFS") at 15-19.

Any subsidy payments made directly to carriers should be based on either: (1) proxy cost model estimates of forward-looking economic costs;[4] or (2) competitive bidding to be the universal service provider.[5] With respect to the proxy models, the Commission should adopt the Joint Board's recommendation to rely on forward looking economic costs, not embedded costs, as the basis of calculating required universal service subsidy levels. Only forward looking costs are true economic costs that can be used to guide efficient investment and consumption decisions.[6] The Commission should refine the existing proxy models through the workshop process and allow both comments and reply comments once the workshops have been held.[7] The Commission also should commence a separate proceeding to design and implement auctions.

Another way to reduce economic inefficiency is to apply cost-causative pricing wherever possible. The comments in this proceeding show broad agreement that the Joint Board's recommendation to reduce the subscriber line charge ("SLC") fails to promote economic efficiency because the SLC is a non-traffic sensitive charge that recovers non-traffic sensitive costs in the most economically efficient manner from end

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4 *See, e.g.*, Comments of Ad Hoc TUC at 8-11; Comments of Association for Local Telecommunications Services ("ALTS") at 6; Comments of MCI at 2-3; Comments of MFS at 20-23; Comments of National Cable Television Ass'n. ("NCTA") at 5, 19.

5 *See, e.g.*, Comments of Ameritech at 11; Comments of GTE Service Corp. ("GTE") at 59-65; Comments of General Services Administration at 9-10; Comments of Personal Communications Industry Ass'n. ("PCIA") at 15.

6 Comments of Ad Hoc TUC at 6-8.

7 *Id.* at 11.

users.[8] Indeed, Commissioner Chong's separate statement[9] and Commission findings in the recent interconnection proceeding[10] also support the notion that a reduction of the SLC will be economically inefficient. Therefore, AirTouch agrees with the commenters who urge the Commission to reject the *RD's* recommendation to reduce the SLC and urges the Commission to take up the issue of the appropriate level of the SLC in the Commission's *Access Charge Reform* proceeding, CC Docket No. 96-262.[11]

The appropriate use of cost-causative pricing is part of a more general concern with the recommendations contained in the *RD*. Specifically, the Commission must be mindful of the unintended harm to economic efficiency in designing universal service taxation and subsidy policies. In short, the choice of tax base can dramatically affect the deadweight loss, or economic efficiency, of any mechanism of taxation. To that end, AirTouch recommends that the Commission adopt a modified version of a proposal put forth by several carriers — a fixed universal service surcharge levied on end-users.[12]

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8 *See, e.g.*, Comments of Ad Hoc TUC at 25; Comments of Ameritech at 16; Comments of AT&T at 13; Comments of United States Telephone Association ("USTA") at 20.

9 *See RD*, Separate Statement of FCC Commissioner Rachelle B. Chong 6 (rel. Nov. 7, 1996)("Chong Separate Statement").

10 *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, CC Docket No. 96-98, FCC 96-182, *Notice of Proposed Rule Making* (rel. April 19, 1996).

11 Comments of Bell Atlantic at 23; Comments of MCI at 16; Comments of MFS at 34. AirTouch believes that the SLC may need to be increased, not decreased as the *RD* suggests.

12 *See, e.g.*, Comments of GTE at 33-37; Comments of TDS Telecommunications Corp. at 6; Comments of AT&T at 8; Comments of BellSouth at 15.

Moreover, in light of the efficiency costs of universal service subsidies, the Commission should avoid overly broad universal service programs. In several instances, this will entail scaling back the scope of the *RD's* proposed programs. In particular, the Commission should adopt a $40 benchmark for high-cost support,[13] should set a $1.5 billion annual cap on support for schools and libraries,[14] should not subsidize inside connections for schools and libraries,[15] should not subsidize single line business subscribers,[16] and should not subsidize network buildout needed to offer advanced services to rural health care providers.[17] Each of these reductions finds support in the record and, in each case, the costs of the subsidies outweigh the benefits.

A final way to reduce efficiency losses is to coordinate universal service policies at the state and federal levels. Absent coordination: (1) the ILECs may continue to reap the benefits of large, implicit cross-subsidies; (2) state and federal programs may work at cross-purposes or needlessly duplicate one another; and (3) telecommunications service

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13 AirTouch notes that US WEST, Inc. ("US WEST") proposes a $30 benchmark and the USTA supports a benchmark of 1 per cent of the median national income. Comments of US WEST at 27-29; Comments of USTA at 10-11.

14 There is substantial record support for adopting some form of a cap for the universal service fund. *See, e.g.*, Comments of AT&T at 2; Comments of Time Warner Communications Holdings, Inc. ("Time Warner") at 31; Comments of NYNEX at 37-39; Comments of Illinois Public Service Commission ("Illinois PSC") at 6; Comments of Bell Atlantic at 21; Comments of Ad Hoc TUC at 29-32; Comments of Citizens Utilities Co. at 3, 16-17.

15 As demonstrated below, there is also substantial record evidence support for excluding inside connections from universal service support. *See infra* text at 27-30.

16 Several commenters support excluding single line businesses from universal service support. *See, e.g.,* Comments of Sprint at 14; Comments of Ameritech at 4-7; Comments of ALTS at 5-6; Comments of Cox Communications, Inc. at 3-4.

17 *See* Comments of NCTA at 23-4; Comments of Ameritech at 27.

providers and their customers may be overtaxed, taxed twice, or otherwise caught between two different programs. Moreover, AirTouch submits that such coordination is mandated by Section 254(f) which requires that state universal service programs be consistent with and not "rely on or burden" federal universal service programs.[18]

Because the issues of proxy models, auctions, and the SLC are better addressed in other proceedings or other rounds of this proceeding, the remainder of these reply comments focus on: (1) projected efficiency losses; (2) the proper choice of tax recovery to minimize these efficiency losses; (3) the scope of universal service support programs; and (4) a proposed mechanism for coordinating state and federal universal service policies.

## III. ADOPTING THE *RD's* PROPOSED POLICIES WOULD TRIGGER MASSIVE TAXES THAT WILL UNNECESSARILY HARM CONSUMERS AND ECONOMIC EFFICIENCY

Mandatory contributions toward universal service support are a tax levied on telecommunications users and providers and the effects of such a tax on consumer welfare and competition must be fully considered in designing a new universal service contribution scheme. To that end, AirTouch provided the Commission with projections of the efficiency losses[19] associated with the taxes that would be needed to support the

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18 47 U.S.C. § 254(f).

19 These efficiency costs, known as the *deadweight loss* of taxation, are *in addition* to the direct losses of income that consumers suffer from bearing the tax burdens.

*RD's* proposed policies.[20] In light of the recently-filed comments, AirTouch hereby updates some of the calculations.

### A. Projected Universal Service Tax Rates

The tax rate is derived by taking revenue needs and dividing them by the tax base. Beginning with revenue needs, the new universal service fund will cover three main categories of expenses: (1) subsidies for high-cost areas; (2) subsidies for low-income subscribers; and (3) subsidies for schools, libraries, and rural health care providers. For high-cost support, AirTouch relied on sample figures from the *RD* for a $20.00 benchmark: $5.3 billion for the Hatfield model[21] and $14.6 billion for the BCM2,[22] which are the same numbers as in NARUC's analysis of tax rates.[23] Using the same figures as in AirTouch's comments for the other revenue needs, projected total revenue needs range from $8.88 billion to $19.43 billion.[24]

There is disagreement with respect to the appropriate choice of tax base. The Joint Board recommends that the tax base for the schools, libraries, and rural health care

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20 Comments of AirTouch on *RD* at 5-13.

21 This figure does not include Alaska and Hawaii, and thus understates the needed funding. *See* Telecommunications Industries Analysis Project, "1995 Calculated Interstate and Intrastate Revenues for the Proposed Universal Service Fund and Format for Comparisons of Different Benchmarks 12 (Dec. 4, 1996; revised Dec. 13, 1996) ("TIAP").

22 *RD*, Appendix F, ¶ 18.

23 Staff Subcommittee on Communications, National Association of Regulatory Utility Commissioners, "The Revenue Base for Federal Universal Service Support, A Report to State Public Utility Commissions," 13 (issued Dec. 8, 1996) ("NARUC Report").

24 Comments of AirTouch on *RD* at 8.

provider support programs be levied on both intrastate and interstate net revenues of providers of interstate telecommunications services.[25] Several commenters, including ILECs, CLECs, and interexchange carriers, supported this tax base for contributions to all three categories of universal service support.[26] In its comments, AirTouch constructed a preliminary estimate of total intrastate and interstate telecommunications services revenues with intercarrier payments netted out equal to $155.565 billion.[27] The NARUC Report relies on the TIAP estimate of $164 billion.[28] TIAP also estimated that $69 billion of this total falls within the interstate jurisdiction.[29]

Dividing the revenue needs by the various tax bases gives rise to the following ranges of tax rates:

**Projected Federal Tax Rates**

| | |
|---|---|
| *All net revenues* | *5 - 12 percent* |
| *Interstate net revenues only* | *13 - 28 percent* |

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25 *RD* at ¶ 817.

26 *See, e.g.*, Comments of AT&T at 5; Comments of BellSouth at 11; Comments of MFS at 41; Comments of USTA at 17.

27 Comments of AirTouch at 10.

28 NARUC Report at 9, 25; TIAP at 1.

29 TIAP at 2; NARUC Report at 13.

Of course, the actual tax burdens levied on telecommunications providers and subscribers would be larger than estimated here and below because there will also be taxes to fund state programs.[30]

### B. Projected Welfare Losses

Using the standard formula for the deadweight loss of taxation,[31]

*(tax rate*[32] *+ Lerner index*[33]*) x tax rate x elasticity of demand*[34] *x service revenue,*[35]

these projected tax rates can be used to calculate the deadweight loss of welfare that is suffered *above and beyond the direct costs of the taxes themselves.* The following projections illustrate the magnitudes of the potential efficiency losses:

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30 Assessments at these rates, if levied on gross revenues, may be confiscatory because demand for CMRS services is extremely price elastic.

31 For the derivation of this formula *see* Comments of AirTouch on *RD*, Appendix.

32 As shown earlier, projected tax rates range from 5 percent to 12 percent if all net revenues are the base, and from 13 to 28 percent if only interstate net revenues serve as the base. *See supra* text at 10.

33 Reasonable estimates of the Lerner index are between .3 and .7, or even higher. Comments of AirTouch on *RD* at 11.

34 AirTouch has applied the estimated elasticity of long distance services. Conventional estimates range from .4 to .72 in absolute value. *Id.* at 12.

35 As in its comments on the *RD*, AirTouch has calculated deadweight loss solely for the effects of the increase in long distance and wireless. In order to obtain this number from the TIAP total net revenues figure, that figure has been multiplied by the ratio of long distance and wireless revenues to total revenues in the earlier AirTouch revenue projections. By ignoring the distortions in components of local service, this approach understates the likely deadweight losses for cases in which the tax base includes intrastate and interstate revenues.

**Projected Deadweight Loss of Tax on Interstate and Intrastate Net Revenues**

| | | | |
|---|---|---|---|
| *Tax Rate* | .05 | .085 | .12 |
| *Elasticity* | .4 | .56 | .72 |
| *Lerner Index* | .3 | .5 | .7 |
| ***Deadweight Loss*** (billions per year) | \$0.668 | \$2.655 | \$6.405 |

**Projected Deadweight Loss of Tax on Interstate Net Revenues Only**

| | | | |
|---|---|---|---|
| *Tax Rate* | .13 | .205 | .28 |
| *Elasticity* | .4 | .56 | .72 |
| *Lerner Index* | .3 | .5 | .7 |
| ***Deadweight Loss*** (billions per year) | \$1.310 | \$4.773 | \$11.685 |

The interstate-only tax base gives rise to much higher deadweight losses for any given amount of tax revenue because all of the taxes fall on relatively elastic long distance and wireless services. Again, these figures understate the likely deadweight loss because they do not include the negative efficiency effects of state taxes.

### C. Summary of the Analysis

The set of policies proposed in the *RD* would significantly suppress the demand for toll and wireless telecommunications services. The Commission must take these efficiency costs of universal service programs into consideration when choosing whether to expand federal universal service programs and trigger additional costs. Moreover, because deadweight losses are costs that have no offsetting benefits, universal service policy should be designed to minimize deadweight losses and maintain competitive neutrality. The remainder of these reply comments discuss how to achieve these public policy objectives.

## IV. UNIVERSAL SERVICE CONTRIBUTIONS SHOULD BE ASSESSED AS A PER-LINE CHARGE PAID DIRECTLY BY END USERS

### A. Statutory Criteria must Guide the Choice of Contribution Mechanism

Section 254 of the Act requires that universal service mechanisms be "[s]pecific and predictable."[36] In addition, all mechanisms for assessing contributions to the universal service fund must be "equitable and nondiscriminatory."[37] The *RD* recommends further that the Commission require that universal service support mechanisms and rules "be applied in a competitively neutral manner."[38] In AirTouch's view, these statutory and other requirements give rise to three broad principles that must guide the Commission in designing the contribution mechanism, or tax scheme, to support universal service: (1) fairness; (2) economic efficiency; (3) and accountability. An "equitable and nondiscriminatory" universal service mechanism must be fair and efficient from the perspective of both telecommunications carriers and end users, who will ultimately bear the cost of universal service. Similarly, "specific and predictable"

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36 47 U.S.C. § 254(b)(5).

37 *Id.* § 254(b)(4).

38 *RD* at ¶ 23.

support programs foster accountability by informing telecommunications carriers and their customers, as precisely as possible, of the costs and benefits of universal service support mechanisms.

**1. Fairness.** Public finance economists have developed two fundamental notions of fairness in assessing taxes.[39] *The ability to pay doctrine* holds that those parties with a greater ability to pay, should pay more.[40] *The benefits doctrine* suggests that tax payments should be in proportion to the benefits derived from the funded programs.

**2. Efficiency.** The Commission should aim to minimize the distortions in economic activity that result from the collection of a given contribution toward the subsidy programs.[41] As AirTouch described in its comments before the Joint Board, there are several broad principles that economists have developed for promoting efficient taxation:[42]

- Have as broad a tax base as possible.[43]
- Rely on lump-sum taxation to the extent feasible.
- Where prices are distorted by the need to raise contribution, the responsiveness of supply and demand to price must be taken into account.

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39 For a survey, *see* Richard A. Musgrave, "A Brief History of Fiscal Doctrine." In *Handbook of Public Economics Vol. 1*, edited by Alan J. Auerbach and Martin Feldstein. Amsterdam: North Holland, 1985.

40 *Cf.* Comments of California Dept. of Consumer Affairs at 1-22.

41 *See* Comments of PCIA at 22.

42 Reply Comments of AirTouch at 16.

43 Thus, it would be in the public interest to expand the base to Internet service providers and private carriers, particularly if the former are eligible to receive subsidies.

- Do not distort production without a good reason.
- Do not distort competition.

**3. Accountability.** In addition to promoting fairness and efficiency, the Commission should embrace the principle of accountability. There is widespread agreement among the commenters that principle of accountability demands that the public has the right to know what it is paying and how the tax revenues are being spent.[44] This means that universal service charges should appear as separate lines on subscriber bills, with a clear explanation of what they are. Moreover, universal service taxes should not be hidden in charges (such as the CCLC) that are levied on carriers purchasing services from the ILECs, but ultimately are borne by telecommunications consumers.

### B. A Flat End-User Surcharge Satisfies the Criteria of Fairness, Efficiency, and Accountability

Consistent with the recommendations of numerous commenters,[45] AirTouch urges the Commission to collect contributions to federal universal service programs by levying a non-traffic sensitive, or lump-sum, contribution assessed on each access line (in the case of residential end users, the Commission may want to limit the contribution to one per household). This could be done by having each subscriber to the public switched telephone network ("PSTN") make a flat monthly payment toward universal service (except, of course, those eligible for subsidies). In contrast to today's system, the

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44 *See, e.g.*, Comments of AT&T at 9; Comments of MFS at 12-13; Comments of California Dept. of Consumer Affairs at 19, 40; Comments of PageNet at 15; Comments of SBC Communications, Inc. ("SBC") at 11; Comments of Sprint at 3; Comments of BellSouth at 14-16; Comments of PCIA at 3; Comments of US WEST at 45-47.

45 *Id.*

payment would be by the end user and would be triggered by connecting to the PSTN, rather than presubscribing to an interexchange carrier.[46]

This approach builds on two fundamental ideas: (1) an end-user surcharge is administratively workable, accountable, and in many respects fair and competitively neutral;[47] and (2) the Commission should not distort consumption and investment decisions by levying traffic-sensitive charges to recover non-traffic-sensitive costs.[48] AirTouch believes that this approach is equitable, efficient, and satisfies the principle of accountability.

**1. Fairness.** A flat surcharge is equitable because all telephone subscribers contribute equally. To the extent that end users vary in size, use patterns, and ability to pay, the Commission may wish to vary levels of contribution across classes of end users. If so, AirTouch submits that using the notion of ability to pay, subscriber income level would be the most logical choice. Such variation could readily be incorporated into a flat end-user surcharge: residential end users below a defined income level would not pay the contribution (indeed they would be eligible for universal service subsidies), while end users above the threshold would pay the fixed monthly contribution. By piggybacking on the criterion used to assess eligibility for subsidies (*e.g.*, Lifeline and Linkup), this

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46 This is similar in some respects to the proposal for reforming the CCLC by converting it to a lump-sum charge considered by the Joint Board. *RD* at ¶ 776.

47 *See, e.g.,* Comments of AT&T at 8; Comments of BellSouth at 15; Comments of USTA at 22.

48 *See* Comments of GTE at 37. This refers to the fact that universal service costs are non-traffic-sensitive with respect to the traffic of the end-users making contributions to the fund.

approach would not create additional administrative burdens. It is a thus a low-cost way to account for differences in ability to pay.

Further, this approach is clearly superior to an indirect approach that relies on usage-based taxes, such as a net revenues tax. Usage-based taxes might be rationalized if people who pay a lot for telephone service were either relatively wealthy or reaped greater benefits from the promotion of universal service than other subscribers, and therefore should contribute more to funding universal service. In practice, however, neither correlation may hold strongly. Data from the AT&T nondominance proceeding suggest that the link between subscriber income and monthly bills is a weak one. Moreover, high payments for telephone services may reflect high prices, rather than high volumes. While high volumes may be associated with greater net consumer benefits, high prices typically are associated with low net consumer benefits. Thus, from either an ability-to-pay or benefits-received perspective, the size of subscriber's bill (or the size of carrier revenues) is a poor way to tie subscribers' contribution burdens to some notion of how much they "deserve" to pay.

**2. Efficiency.** With regard to the economic efficiency of an end user surcharge, it is a well-established principle of public finance economics that policy makers should rely on lump-sum taxation to the extent feasible.[49] A pure lump-sum tax (or one that depends on tax payer characteristics that are beyond his or her control) is efficient because the person on whom it is levied can do nothing to affect the amount, and thus there is no incentive for the tax payer to distort his or her actions. Of course, an end-user surcharge is not a perfect lump-sum tax; a household can avoid it by disconnecting from

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49 *See* Reply Comments of AirTouch at 16.

the PSTN. But a variety of empirical studies have found that the elasticity of demand for local wireless services is very low. Hence, this near-lump-sum tax would be a desirable way to raise revenues to support universal service subsidies. Similarly, because they show relatively high price elasticities of demand for toll services, empirical studies support the conclusion that it is not sound policy to raise universal service subsidies by taxing toll services.

To get a sense of the efficiency benefits of this approach in comparison with a net revenues tax, AirTouch has made some preliminary projections of the deadweight loss associated with this approach. This is done using the deadweight loss formula presented above.[50] As earlier, revenue needs are taken to range from $8.88 billion to $19.43 billion annually. Taking the tax base to be basic area revenues plus end user revenues (*e.g.*, the SLC) gives a tax base of approximately $39 billion annually.[51] For local services, prices often are below cost for policy reasons. Because this deviation from cost is a policy choice, it appears reasonable to set the Lerner index at 0 for purposes of calculating deadweight loss.

There are several estimates of elasticities of demand for basic subscription, all of which are quite small. The deadweight loss projections below are based on elasticities of demand ranging from .005 to .05.[52]

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50 *See supra* text at 11.

51 This figure is based on *Statistics of Common Carriers*, Table 2.9. Thus, it excludes carriers with annual revenues under $100 million. Because it increases the projected tax rate, the likely effect of this omission is to overstate the resulting deadweight loss.

52 Jerry Hausman, Timothy Tardiff, and Alexander Belinfante ("The Effects of the (continued...)

Using the fact that the tax rate is given by revenue needs divided by the size of the tax base, and substituting the resulting parameters into the deadweight loss formula, the projected deadweight loss is as follows:

**Projected Deadweight Loss of Flat End-User Surcharge**

| | | | |
|---|---|---|---|
| *Revenue Needs* (billions per year) | 8.88 | 14.16 | 19.43 |
| *Elasticity* | .005 | .028 | .050 |
| ***Deadweight Loss*** (billions per year) | $0.005 | $0.072 | $0.242 |

52 (...continued)
Breakup of AT&T on Telephone Penetration in the United States," *American Economic Review* 83:2, 178-184) estimated the residential elasticity of access with respect to the basic access price for measured rate service to be 0.0052 and the elasticity of access with respect to the difference between flat and measured rate service to be 0.0027. Adding a new fixed charge to the monthly bill would not change the difference between flat and measured rate, but would increase the basic access price for measured rate service. Thus it appears that the elasticity of access with respect to the price of flat rate service is best estimated as 0.0052.

Robert W. Crandall and Leonard Waverman (*Talk is Cheap: The Promise of Regulatory Reform in North American Telecommunications*. Washington, D.C.: The Brookings Institution, 1995, p. 93) conclude that a realistic base case for the price elasticity of demand for access for both business and residential subscribers is 0.02, although they recognize that business elasticity is usually measured as lower (in absolute value) than 0.02 at current prices.

Lester D. Taylor and Donald Kridel ("Residential Demand for Access to the Telephone Network," in *Telecommunications Demand Modeling: An Integrated View*. A. de Fontenay, M.H. Shugard, D.S. Sibley (eds.). Elsevier Science Publishers B.V. (North-Holland), 1990, pp.105-117) do not explicity report estimates of the elasticity of access with respect to the price of flat rate service, but they conduct simulations from which arc-elasticities may be computed. Frank A. Wolak ("Telecommunications Demand Modeling (Review Article)," *Information Economics and Policy*, vol. 5, 1993, pp.179-195) summarizes their findings by computing an arc-elasticity of total access with respect to the price of access as 0.05.

While an annual deadweight loss of $242 million is far from trivial, it is tiny in comparison with the deadweight losses projected for the use of a revenues tax. The comparable projected deadweight losses for a net revenues tax ranged from $668 million to over $6.4 billion for a tax on interstate and intrastate revenues, and from $1.3 billion to approximately $11.7 billion for a tax on interstate revenues only. In short, by using net revenues instead of a flat end-user surcharge, the Commission will trigger billions of dollars of efficiency losses annually that could otherwise be avoided.

There may also be penetration benefits, as well as a reduction in deadweight loss. As discussed in AirTouch's comments in this proceeding, the moving from traffic-sensitive contributions raised from toll services to a fixed charge on access lines may increase subscribership.[53] This effect arises because economic theory and empirical evidence indicate that an end user will make his or her decision whether to connect to the PSTN by considering the full vector of telecommunications prices (*e.g.*, per-month and per-minute local exchange charges, intraLATA toll, and interLATA toll). Further, any concerns about disconnects are greatly mitigated by the fact that the Commission could choose to exempt low-income consumers from paying the fixed charge.

A final efficiency benefit of this approach is that it is competitively neutral because it does not vary by the type of technology or the identity of the carrier.

**3. Accountability.** Because a surcharge will appear as a clearly labeled item on the subscriber's bill, this approach will clearly be a specific and predictable support mechanism thereby satisfying the principle of accountability. Customers will be

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[53] Comments of AirTouch at 16-17.

informed of the costs and benefits of the universal service programs. It is also administratively simple.

AirTouch recognizes that the Joint Board concluded that a mandatory end user surcharge is prohibited.[54] This conclusion, however, is without merit and should not prevent the Commission from adopting the proposed end user surcharge. As AT&T stated, "there is no escaping the fact that consumers will ultimately bear the costs of universal service support, whether through carrier rates or a separate line-item on the retail bill."[55] The California Public Utilities Commission put it well:

> Some parties have argued that the Act prohibits end user surcharges because it indicates that carriers must contribute; this argument makes no economic sense. Much like a tax, the degree to which carriers or consumers will pay for a universal service assessment is dictated by characteristics of the market, i.e., the elasticities of supply and demand, not the mechanics of collection.[56]

Consequently, AirTouch urges the Commission to adopt and end user surcharge consistent with the discussion above. No other proposal comes close to satisfying the principles of equity, efficiency, and accountability and thus the requirements of Section 254.

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54 *RD* at ¶ 812.

55 Comments of AT&T at 8; *see also* Comments of LCI International, Inc. at 13-14.

56 Comments of the People of the State of California and the Public Utilities Commission of the State of California at 14 (footnotes omitted).

### C. Alternative Bases for Assessing Contribution All Fare Poorly in Terms of Fairness, Efficiency, and Accountability.

The Joint Board and other parties have proposed several alternative bases for assessing universal service contributions, including: (1) a tax on net revenue;[57] (2) a tax on retail revenues;[58] and (3) a tax on minutes of use.[59] These proposals, however, are inadequate and should not be adopted by the Commission.

**1. A Tax on Net Revenues.** The *RD* proposes basing the contribution toward universal service on *net telecommunications revenues,* which backs out payments to other telecommunications providers on whose services the tax already has been collected in order to avoid double taxation.[60] While this tax is preferable to one on gross revenues, it has several significant flaws.

For carriers with higher prices per unit, the tax is equivalent to a greater cost increase.[61] As AirTouch demonstrated in reply comments to the Joint Board, this approach is thus neither technologically nor competitively neutral when carriers compete with each other using different technologies to provide differentiated services.[62]

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57 *See RD* at ¶ 807; Comments of Telecommunications Resellers Ass'n at 6; Comments of MFS at 40-41; Comments of WorldCom, Inc. at 42-43.

58 *See* Comments of Bell Atlantic at 10; Comments of BellSouth at 11-14; Comments of Ameritech at 15-17; Comments of NYNEX at 18; Comments of US WEST at 45.

59 *See* Comments of Competition Policy Institute at 10.

60 *See RD* at ¶ 807.

61 Technically, this would not be an issue if all prices in the economy other than leisure were being increased proportionately. In practice, of course, they are not.

62 Reply Comments of AirTouch at 13-15.